

PERCEPTIONS OF INSUFFICIENT BREAST MILK: A COMPARISON OF DEPRESSED AND NON-DEPRESSED LACTATING MOTHERS

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ABSTRACT

Objective: The objective of the current study was to compare the perceptions of depressed and non-depressed lactating mothers regarding breast feeding.

Study Design: Cross-sectional comparative study.

Place and Durations of Study: Bolan Medical Complex Hospital Quetta from March 2010 to March 2011.

Material and Methods: All mothers who fulfilled the inclusion criteria were screened with self-reporting questionnaire and Edinburgh post natal depression scale by trained female researchers. A detailed proforma was used to obtain information on demographic, pattern of breast feeding, antenatal information variables. The perception of insufficient milk (PIM) questionnaire was also applied.

Results: In this study the majority of the mothers booked for antenatal care 84% but only one third 26% had proper information about breast feeding both in depressed and non-depressed mothers. Most of the mothers were multigravida 73% and about 27% were primigravida. Depressed mothers were 41% who scored >12 on EPDS, while 59% were non-depressed who scored >12 on EPDS. Depressed group 18 (42%) scored less than 30 while non-depressed group 8 (13.5%) scored less than 30.

Conclusion: The view of insufficient milk has a significant and control atmosphere in the interruption of breast milk in the postnatal depressive lactating mothers.

Keywords: Depressed, Edinburgh post natal depression, Lactating mothers, Perceptions of insufficient, Questionnaire.

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INTRODUCTION

In the developing countries, more than 150 million children under the age of five years are nourished¹ and the infant mortality rate of 77 per 1000 in the developing countries, including Pakistan, is also mainly due to malnutrition and malnutrition related diseases.

The postnatal depression and postpartum psychosis are the major psychiatric disorders that occur in the puerperium, which are coded in the two major classification systems in psychiatry i.e. ICD-10 and DSM-IV. Postnatal depression implies the occurrence of a major depressive episode in the mother in the six weeks following childbirth while, postpartum psychosis is

diagnosed when delusions, hallucinations and thought disorder are present in addition to affective symptoms^{2,3}.

Postnatal depression is an important public health problem worldwide and rate is relatively higher in developing countries⁴, and about 1 in 4 women in developing countries suffer from depressive illness around the period of childbirth². It is evident from different studies that maternal depression is a major risk factor for poor growth of infants in South Asia^{5,6}.

Recent epidemiological studies have reported high rates of postnatal depression (PND) in developing countries^{7,8}, at least 15% to 35% of mothers experiencing a marked depressive illness in the months following childbirth. Postnatal depression is disabling not only for the mother, but also has long-term psychological⁹ and physical health consequences for the infant¹⁰.

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Due to the vague & somatic presentation of postnatal depression patients to their doctors, the underlying diagnosis is often missed. This means excessive morbidity for the patients and adverse health consequences for the infants as they depend on their mothers for care. This proforma is available in different languages^{11,12}.

Table-I: The sociodemographic profile antenatal information and the patterns of the breast feeding of the study participants (n=100).

Socio-demographic characteristics of the study participants		Frequency	Percentages
Gender of baby	Male	49	49%
	Female	51	51%
Ethnicity of mother	Punjabi	67	67%
	Pathan	18	18%
	others	15	15%
Residence of mother	Urban	95	95%
	Rural	5	5%
Parity of mother	1	27	27%
	2	17	17%
	3	25	25%
	4	12	12%
	More than 4	19	19%
Education of mother	Primary	32	32%
	Middle	17	17%
	Matriculate	9	9%
	Intermediate	5	5%
	Uneducated	37	37%
Antenatal Information			
Booked	Yes	84	84%
	No	16	16%
Breast feeding information	Yes	26	26%
	No	74	74%
Place of delivery	Home	10	10%
	Health Facility	90	90%
Delivery conducted by	Dai	10	10%
	Health worker	90	90%
Baby stay at hospital	Yes	78	86.7%
	No	12	13.3%
Pattern of Breast Feeding			
Type of breast feeding	Exclusive	30	30%
	Predominant	48	48%
	Partial	20	20%
	none	2	2%
Problem in nipple during last one week	Soar	9	9%
	Cracked	1	1%
	No	90	90%
Feel or hear sucking & swallowing pattern while baby is feeding	Yes	84	84%
	No	16	16%
Does the nipple and areola go into baby's mouth fully	Yes	89	89%
	No	11	11%

underlying diagnosis is often missed. This means excessive morbidity for the patients and adverse health consequences for the infants as they

A lot of research has been conducted on postnatal depression especially in the Western countries on various aspects of this disorder. It is

also evident from one study that about 71%¹³ mothers account inadequate milk production as the commonest reason for not exclusively breast feeding their infants¹⁴ and their perception about inadequate breast milk is implicated in not giving a trial to breast feed the infant. Apart from that, depression is also significantly associated with poverty, having 5 or more children, an uneducated husband and lack of a confident or friend¹⁵.

Since the perception of mothers regarding adequacy of their breast milk affects their decision of continuation of exclusively breast feeding. An

months of age whether on exclusive, predominant or partial breastfeeding were included.

The total of 100 mothers with infants up to 3 months of age fulfilling the required criteria were explained the purpose and nature of study and were invited to participate. Informed written consents were also taken either from mothers or any relative accompanying her. In the present study self reporting questionnaire (SRQ) scale was administered to all the mothers who participated in the study. To compare the suitability, usefulness and validity of the SRQ in

Table-II: Comparison of perception of insufficient milk (pim) and edinburgh postnatal depression (epds) amongst the depressed and non-depressed mothers & independent sample t-test (n=100).

		Status of Depression			Total	
		EPDS <12 non-depressed		EPDS >12 depressed		
PIM	PIM <30	8		18	26	
	PIM >30	51		23	74	
Total		59		41	100	
		Mean	Standard deviation	Mean difference	df	p-value
Total scores on pim	Non-depressed	42.41	± 9.626	9.773	98	0.000
	Depressed	32.63	± 15.086			

important question arises that whether there is any role of perception in affecting the mother’s perception regarding adequacy of breast milk production. The purpose of this study was to look for an existing association between depression and maternal perception regarding adequacy of breast milk.

METHODOLOGY

The study was conducted at immunization clinic (well baby clinic) at the outpatient department of Bolan Medical Complex Hospital Quetta. The study was conducted over a period of one year. Every consecutive depressed lactating mother visiting outpatient department or in-patients of immunization clinic of Bolan Medical Complex Hospital, Quetta, were included whereas every consecutive non-depressed lactating mothers visiting immunization clinic were included in the non-depressed (healthy) group. All Lactating mothers from 17-45 years of age, with infants up to 3

our study we also applied Edinburgh post natal depression scale (EPDS) to all mothers. The purpose for doing this was also two-fold; firstly, to conform the existence of depressive illness and secondly, to rate its severity. Participants scored almost equally both on SRQ and EPDS. This reflected highly significant relationship between both scales on the basis of screening, suitability, usefulness and validity. Different studies in the past had also proved the relationship between SRQ and EPDS.

Those scoring >8/9 on self reporting questionnaire (SRQ) and >12 on Edinburgh postnatal depression scale (EPDS) were included in depressed group whereas those scoring <8/9 on SRQ and <12 on EPDS were included in non-depressed (healthy) group.

Those mothers who score >8/9 on self reporting questionnaire (SRQ) were administered edinburgh postnatal depression scale (EPDS) for

confirmation of depression and only those scoring above 12 on EPDS were included in depressed study group.

The mothers were not known to which group they belong to minimize patient bias. The data were analyzed using SPSS (version 10). Descriptive statistics were calculated for socio-demographic variables. Mean ± SD for maternal age, duration of breast feeding in last child and in the last 24 hours how many times did breast feed the child, frequency (%) for ethnicity, parity,

Majority of the mothers got booked antenatal 84 (84%) but interestingly only one third 26 (26%) had proper information about breast feeding in both depressed and non-depressed mothers. Majority of the baby 78 (86.7%) stayed at hospital, while 12 (13.3%) did not stay at hospital after delivery (table-I).

The mean age of participants was 27.41 years (S.D ± 4.924 years), the oldest participant was 45 years old and the youngest was 17 years old. The pattern of the breast feeding among both

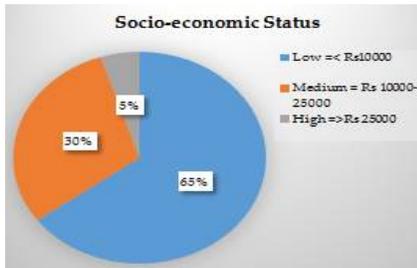


Figure-1: Frequency and percentage of the socio-economic status of the lactating mothers participated in the study.

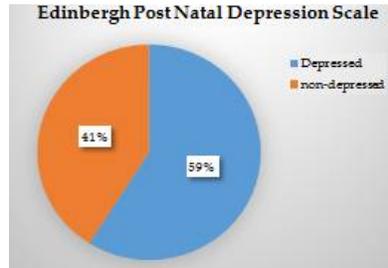


Figure-2: Percentage of the depressed and non-depressed mothers on edinbergh post natal depression scale (EPDS).

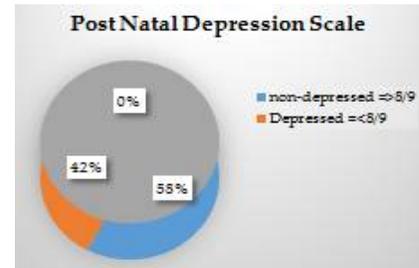


Figure-3: Percentage of the depressed and non-depressed mothers self rating questionnaire (SRQ).

education, residence and socio-economic status. Mean scores with ± SD was calculated for the SRQ, Edinburgh postnatal depression scale (EPDS) & perception of insufficient milk (PIM) scores. Independent sample t-test was applied to compare the mean scores of PIM scale of both depressed and nondepressed (healthy) groups of mothers. A p-value of <0.05 was considered as significant.

RESULTS

A total of 100 lactating mothers with infants up to 3 months of age fulfilling the required criteria were explained the purpose and nature of study and were invited to participate. Most of the mothers 67 (67%) were Punjabi speaking followed by Pushto 18 (18%), others 15 (15%) included Urdu, Hindko, potohari. Regarding residence 95 (95%) belonged to urban area and only 5 (5%) from rural. Majority of mothes were multigravida 73 (73%) and about 27 (27%) were primgravida. Majority of the study participants 68 (68%) were educated whereas only 37 (37%) were illiterate (table-I).

depressed and non-depressed lactating mothers were mainly predominant 48 (48%), exclusive and partial were 30 (30%) and 20 (20%) respectively (table-I).

Regarding the socio-economic status of the participants 65 (65%) were ranging in low socio-economic status <RS 10000, while 30 (30%) were medium Rs 10000-25000 and only 5 (5%) were belonging to high socio-economic class >Rs 25000 (fig-1).

The mean score and standard deviation of SRQ was 7.86 and (S.D ± 5.119) respectively. Participants who scored <12 on Edinburgh post natal depression scale (EPDS) were 59 (59%) and were labeled as healthy or non-depressed while 41 (41%) who scored >12 on (EPDS) were labeled as depressed (fig-2).

Majority of the participants of the study 58 (58%) scored less than <8/9 on the self rating questionnaire (SRQ), while 42 (42%) scored more than >8/9 on SRQ (fig-3).

PIM scale was applied to determine the perceptions of both depressed and nondepressed mothers (based on EPDS scale) regarding adequacy of breast milk production and the results showed that amongst depressed group 18 (42%) scored less than 30 while amongst healthy 8 (13.5%) scored less than 30 i.e. they had lower perceptions regarding adequacy of their breast milk production hence the proportions of depressed mothers (having low perception of adequate milk) was more than the proportion of healthy or non-depressed mothers (table-II).

To determine the difference between PIM score of non-depressed (healthy) and depressed mothers, the independent sample t-test was applied at 5% level of significance, that showed (p -value=0.000). This shows that there was a highly statistically significant difference between both the groups (table-II).

DISCUSSION

A study was conducted to compare the suitability, usefulness and validity of the self reporting questionnaire (SRQ-20) and the EPDS for screening postnatal depression in a mostly illiterate, rural, postnatal population of Pakistani women¹⁶.

In our current study one hundred participants completed the study, on the basis of the score on EPDS, 41 (41%) of the sample was found to be suffering from postnatal depression. This result suggest that postpartum depression is a very common condition in our setting; however unfortunately, because of lack of necessary health checks it largely goes undetected and untreated. Only a few studies have been published on the subject of postnatal depression in Pakistan and several of these have been depicted in the section on literature review. One study appeared in the Journal of Physicians and Surgeons of Pakistan in 2001. It was conducted in Rawalpindi and the stated prevalence of postnatal depression in that study was 37%. The authors of the study observed that this rate was much higher as compared to Western countries and attributed it

to socioeconomic adversity faced by women in Pakistan.

Most of the women in this study have more than three or more children. This finding is in favour to earlier studies done in Pakistan in which depressed women were found to have larger families, which comprised of three or more children. Some of the studies conducted in South Asia have shown multiparity as a risk factor for postnatal depression. A recently published study examined factors associated with depressive symptoms among postnatal women in Nepal¹⁷, a total of 426 postnatal women were included in a cross-sectional structural interview study, 5 to 10 weeks after delivery.

This finding is in contrast to other studies reported from South Asia, including Pakistan in which it has been shown that the prevalence of postnatal depression is very high in rural women^{18,19}. The objectives of the study were to investigate the sociodemographic features, co-morbid anxiety and depression and family functioning in patients admitted with dissociative disorder to a tertiary care hospital. The study concluded that depression with co-morbid dissociative disorder occurred mostly in females who were uneducated and residents of rural areas²⁰.

A study conducted in the UK assessed the relationship between elective caesarean section and postnatal (post-partum) depression compared with the planned vaginal delivery and whether emergency caesarean section or assisted vaginal delivery was associated with postnatal depression compared with spontaneous vaginal delivery²¹. Women who planned vaginal delivery and required emergency caesarean section or assisted vaginal delivery could be reassured that there was no reason to believe that they were at increased risk for postnatal depression.

A cohort study has been done in Brazil to show the association between postpartum depression and interruption of exclusive breastfeeding in the first two months of life²².

Different studies had also been done to determine the perception of inadequate milk production during lactating periods and which favored our study. Breast feeding self-efficacy was measured in-hospital and perception of insufficient milk was measured at 4 weeks postpartum. The results reflected that most mothers intended to exclusively breastfeed, less than 40% were doing so at 4 weeks postpartum. Among the mothers using formula, 73% cited perceived insufficient milk as the primary reason for supplementation or completely discontinuing breastfeeding. Mothers' perception of insufficient milk at 4 weeks postpartum were significantly related to breastfeeding self-efficacy in hospital in the immediate postpartum period ($r=0.45$, $p<0.001$)²³.

Another cross-sectional descriptive study has been done about the parenting self-efficacy and perception of insufficient breast milk in which sixty breastfeeding mothers of infants ages 1 to 11 weeks participated. The perception of insufficient milk (PIM) questionnaire was applied to all participants. The results showed a significant correlation ($r=0.487$, $p<0.01$) between the self-efficacy and perceived insufficient milk scores²⁴.

CONCLUSION

The view of insufficient milk has a significant and control atmosphere in the interruption of breast milk in the postnatal depressive lactating mothers.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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